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a frequency divider, for dividing a transport clock timing signal from said transport clock source into a plurality of timing signals; and

a plurality of encoders, each of said encoders coupled to said frequency divider for respectively receiving and encoding said plurality of programs to produce a respective encoded program stream, each of said encoded program streams being coupled to a switch via a respective buffer memory;

said switch selectively coupling program stream transport packets from said buffer memories for modifying packets associated with a desired time slot to produce a slotted transport stream, said slotted transport stream including respective modified programs having said common time base indicated by said periodically inserted time stamps provided by said received transport stream, wherein a modified packet uses a matching time stamp of said received transport stream.

26. The apparatus of claim 10, wherein initial and replacement packets associated with said desired time slot represent respective first and second programs.

REMARKS

In this non-final Office Action, claims 1-3, 5-10 and 12-26 are pending, of which claims 1-3, 5-10 and 12-26 stand rejected. By this amendment, claims 1, 6, 7, 12, and 26 have been amended and claims 2, 3, 5, 8-11, and 13-25 continue unamended. In view of both the amendments presented above and the following discussion, the applicants submit that none of the claims now pending in the application are anticipated under the provision of 35 U.S.C. §102. Thus, the applicants believe that all of these claims are now in allowable form.

Claim Objections

Claims 6 and 26 are objected to under 37 C.F.R. 1.75. By this amendment, claim 6 has been amended to delete "[replacement]" in line 7, and claim 26 has been amended to be properly dependent from claim 10. Therefore, the applicants respectfully request that the objections be withdrawn.

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Rejections

35 U.S.C. §102

Claims 1-3, 5-10 and 12-26

The Examiner has rejected claims 1-3, 5-10 and 12-26 under 35 U.S.C. §102(e) as being anticipated by the Slattery patent (U.S. Patent No. 6,246,701, issued June 12, 2001). The applicants respectfully traverse the rejection.

The applicants have amended Independent claims 1, 7, and 12 to include additional features that the applicants consider inventive. In particular, claim 1, as amended, (and similarly claims 7 and 12) recites:

"A method for processing a transport stream comprising a plurality of time slots for transporting therein respective programs having a common time base indicated by periodically inserted time stamps, said method comprising:
modifying packets associated with a desired time slot of a received transport stream to produce an output transport stream; and
transmitting said output transport stream; said transmitted output transport stream includes respective modified programs having said common time base indicated by said periodically inserted time stamps provided by said received transport stream, wherein a modified packet uses a matching time stamp of said received transport stream." (emphasis added).

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Holst & Derrick Co., 730 F.2d 1452, 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984)(citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 U.S.P.Q. 193 (Fed. Cir. 1983) (emphasis added)). The Slattery reference fails to disclose each and every element of the claimed invention, as arranged in the claim. That is, the Slattery reference fails to disclose the limitation of "the transmitted output transport stream includes the same periodically inserted time stamp provided by the received transport stream."

The Examiner contends that Slattery discloses "the transmitted output transport stream includes the same periodically inserted time stamp provided by the received transport stream. This is incorrect. In contrast to the above-quoted claim language,

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Slattery teaches that the time stamps (i.e., program clock references or PCRs) are restamped for the output transport stream. That is, the time base associated with the time stamps of the output transport stream is different than the time base associated with the time stamps of the received transport stream. This is a fundamental difference between the Slattery arrangement and the claimed invention.

Slattery teaches the PCR's of a transport stream are restamped. Specifically, Slattery discloses a PCR normalization process where the processor schedules each transport packet to be outputted in a time slot at a particular dispatch time, corresponding to a predetermined delay in the remultiplexer node. If the scheduled transport packet contains a PCR, the PCR is adjusted based on a drift of the local reference clock relative to the program of the system time clock from which the PCR was generated, as well as adjusting PCR time stamp based on a difference between the scheduled dispatch time of the transport packet and an actual time at which the time slot occurs relative to an external clock (see Slattery, Col. 7, lines 50-62).

By contrast, the applicants' invention provides that the transmitted output transport stream includes the same periodically inserted time stamp provided by the received transport stream. That is, the applicants' invention does not require the normalization process, as disclosed in the Slattery reference, since a modified (i.e., replacement) transport packet uses the time stamp of the originally received transport stream. To further illustrate the difference between the applicants' invention and Slattery, the Examiner is invited to refer to FIG. 6 of the applicants' invention. In FIG. 6, the packets of program 1 are illustratively modified (i.e., replaced) by the packets of program 4. The program packets designated 4 in the second transport stream T_{IN2} are multiplexed into the output transport stream T_{OUT} such that the packets of program 4 utilize the slots and time stamps of the transport packets of program 1 in the first transport stream T_{IN1} . Accordingly, the normalization process of Slattery is not required in the applicants' invention. Therefore, for at least the reasons discussed above, each and every element of the claimed invention, arranged as in the claim, is not taught or even suggested by the Slattery reference.

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As such, the applicants submit that independent claim 1 is not anticipated under 35 U.S.C. §102 and is fully patentable thereunder. Moreover, the applicants have amended independent claims 7 and 12, which recite similar limitations as recited in independent claim 1, as amended. As such, the applicants submit that independent claims 7 and 12 are not anticipated under 35 U.S.C. §102 and are fully patentable thereunder. Finally, the remaining claims depend, either directly or indirectly, from independent claim 1 and recite additional limitations thereof. As such, and for at least the same reasons, the applicants submit that these dependent claims also are not anticipated under 35 U.S.C. §102 and are fully patentable thereunder. Therefore, the applicants respectfully request that the rejections be withdrawn.

Conclusion

Thus, the applicants submit that none of the claims, presently in the application, are anticipated under the provision of 35 U.S.C. §102. Consequently, the applicants believe that all these claims are presently in condition for allowance. Accordingly, reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Steven M. Hertzberg, Esq. or Eamon J. Wall, Esq. at (732) 530-9404 so appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

3/26/03

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